



OrthoVirginia

Introduction to Hip and Knee Replacement

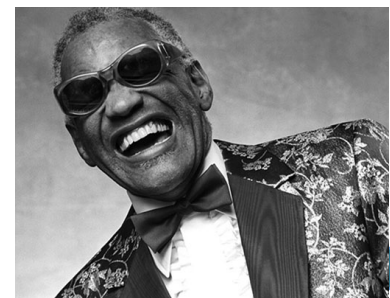
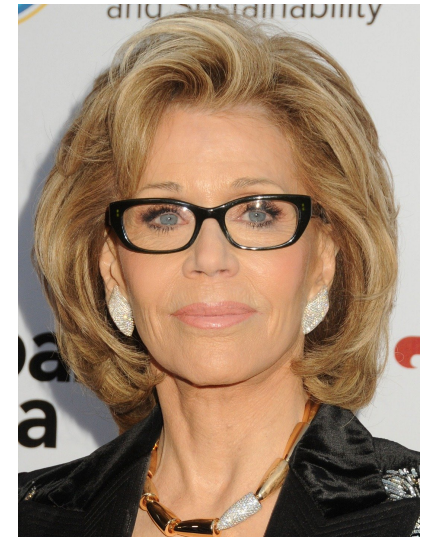
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OBJECTIVES

- Review the background of arthritis and joint replacement
- Review treatment alternative
- Introduce surgical concepts
- Answer all questions

Familiar Faces



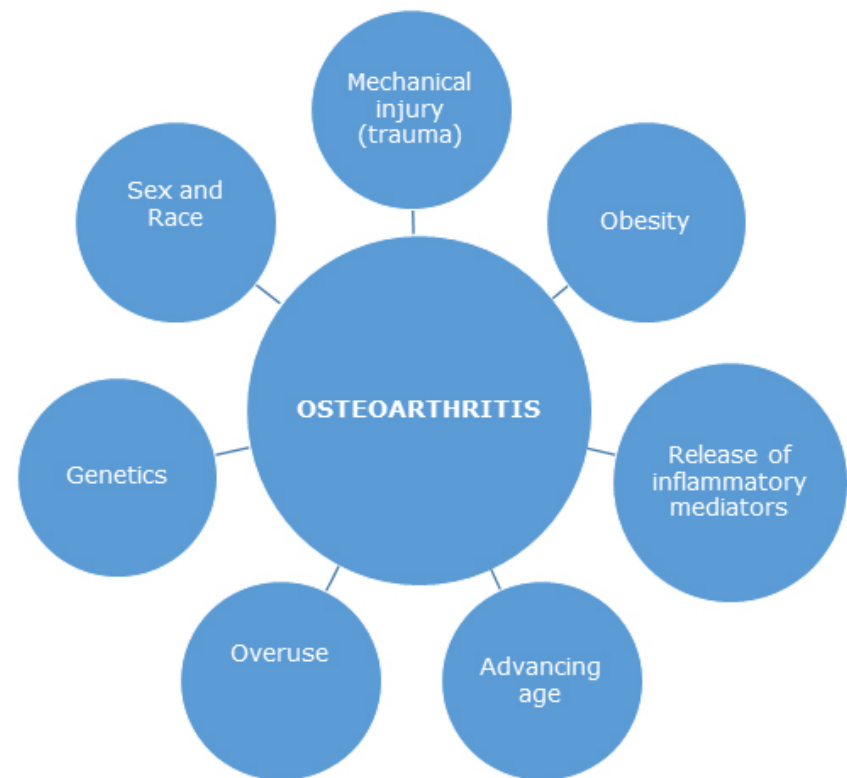
PREVALENCE

- As many as 91 million Americans affected (all types)
- 31 million affected by osteoarthritis (OA)
- Lifetime risk of developing symptomatic knee OA is 45%

OSTEOARTHRITIS

Multifactorial disease of joints

- Abnormal anatomy
- Abnormal biology
- Overuse
- Genetics



NORMAL FUNCTIONING JOINT



- Healthy cartilage
- Well lubricated
- Full motion
- Pain free

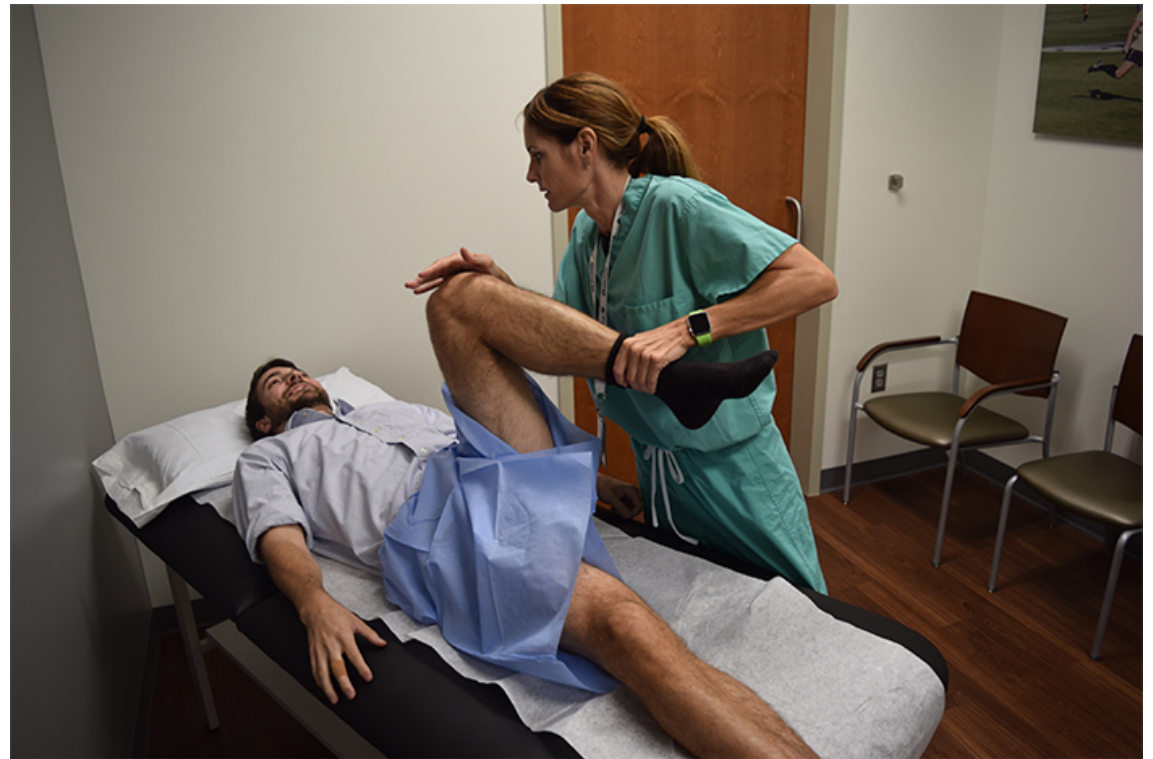
OSTEOARTHRITIC JOINT



- Damage to cartilage
- "Bone on bone"
- Loss of lubricating mechanism
- Loss of motion
- Pain

DIAGNOSIS

- Medical History
- Physical Exam
- X-rays



NORMAL HIP

- Well maintained joint space
- Smooth joint surfaces
- No bone spurs



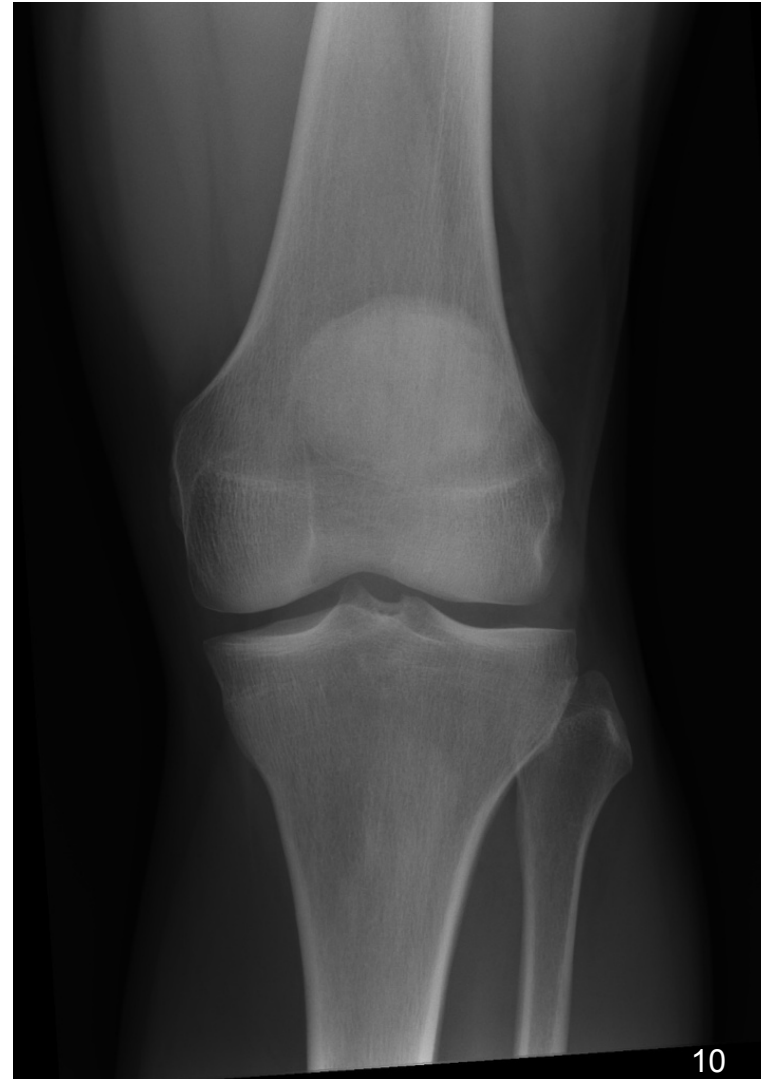
ARTHRITIC HIP

- Loss of joint space (bone on bone)
- Bone cyst
- Bone spurs
- Dense white bone (sclerosis)



NORMAL KNEE

- Well maintained joint space
- Smooth joint surfaces
- No bone spurs



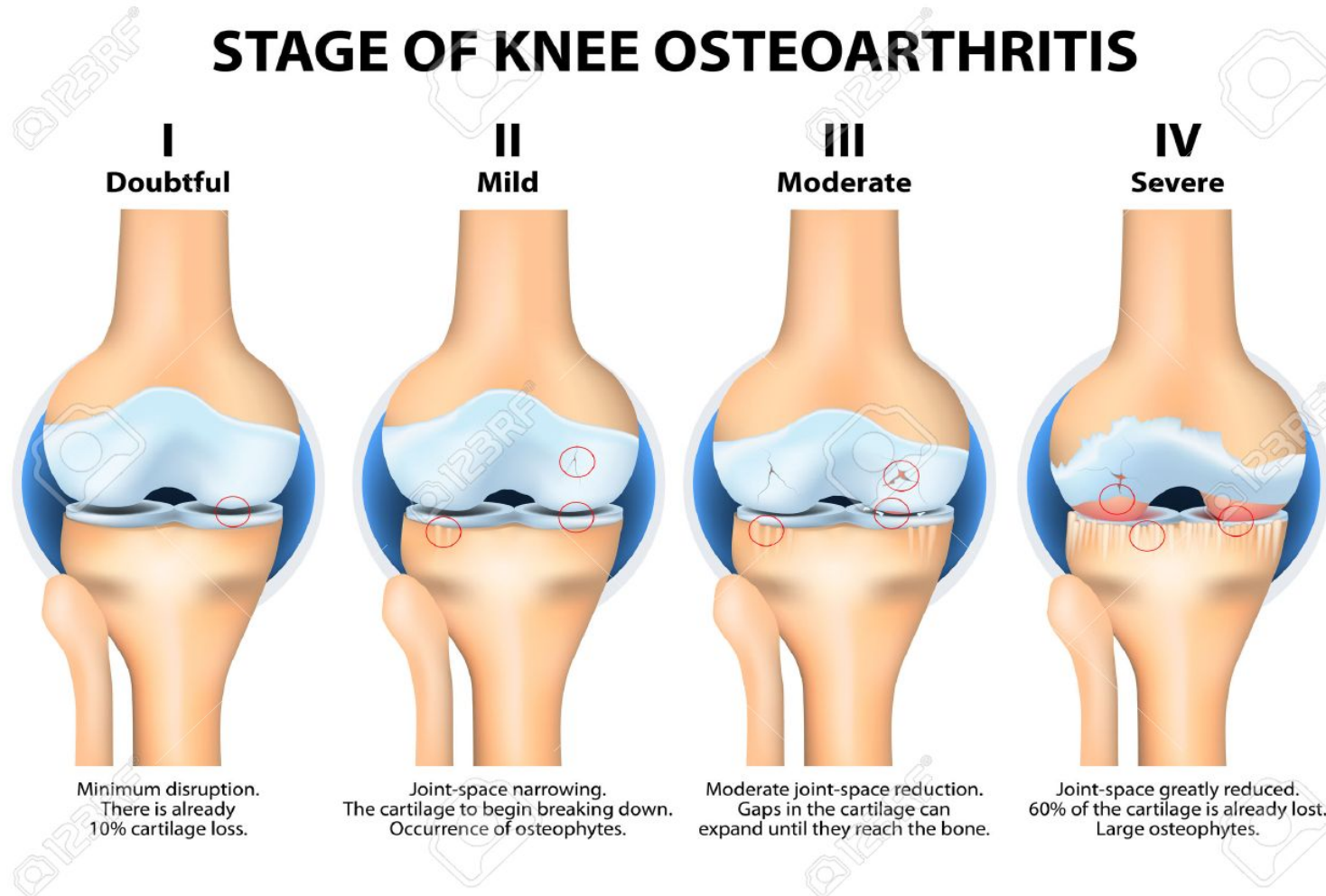
ARTHRITIC KNEE

- Loss of joint space (bone on bone)
- Flattening of surface
- Bone spurs
- Leg deformity



SPECTRUM OF DISEASE

STAGE OF KNEE OSTEOARTHRITIS



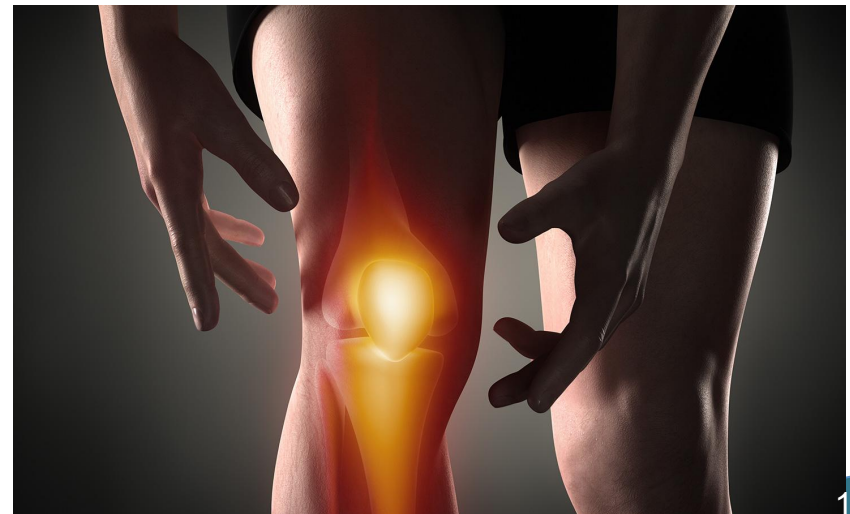
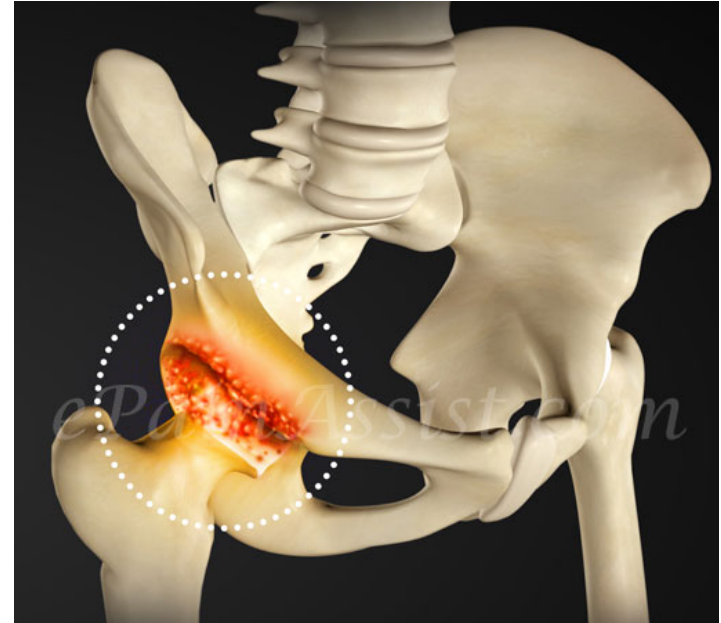
- Similar progression in the hip

TREATMENT OF OA

- Patient Education
- Weight Reduction
- Activity Modification
- Medication
- Cane or Ambulatory Aid
- Surgery

WEIGHT REDUCTION

- Knee experiences forces up to 4-6x body weight
- Less load on joints
- May “wear out” slower
- Safer surgery, less complications



ACTIVITY MODIFICATION

- Lower impact exercise
- Decrease symptoms
- Keeps you active



MEDICATION: ANTI-INFLAMMATORIES

- Many varieties
- Most effective class of medication
- Some topical forms
- Discuss with your physician



MEDICATION: INJECTIONS

- Steroid shot
 - Anti-inflammatory
 - No more than 3-4 per year
 - Law of diminishing returns
- Lubricating injections
 - Single shot or series
 - Variable pain relief
 - Small chance of reaction
- Stem cell/PRP
 - Variable pain relief
 - Not shown to regrow cartilage
 - Out of pocket expense



MEDICATION: SUPPLEMENTS

- Glucosamine/Chondroitin Sulfate
 - Does not grow new cartilage
 - May be anti-inflammatory
 - More effective in mild arthritis
 - Few side effects
 - Not FDA approved



SURGERY

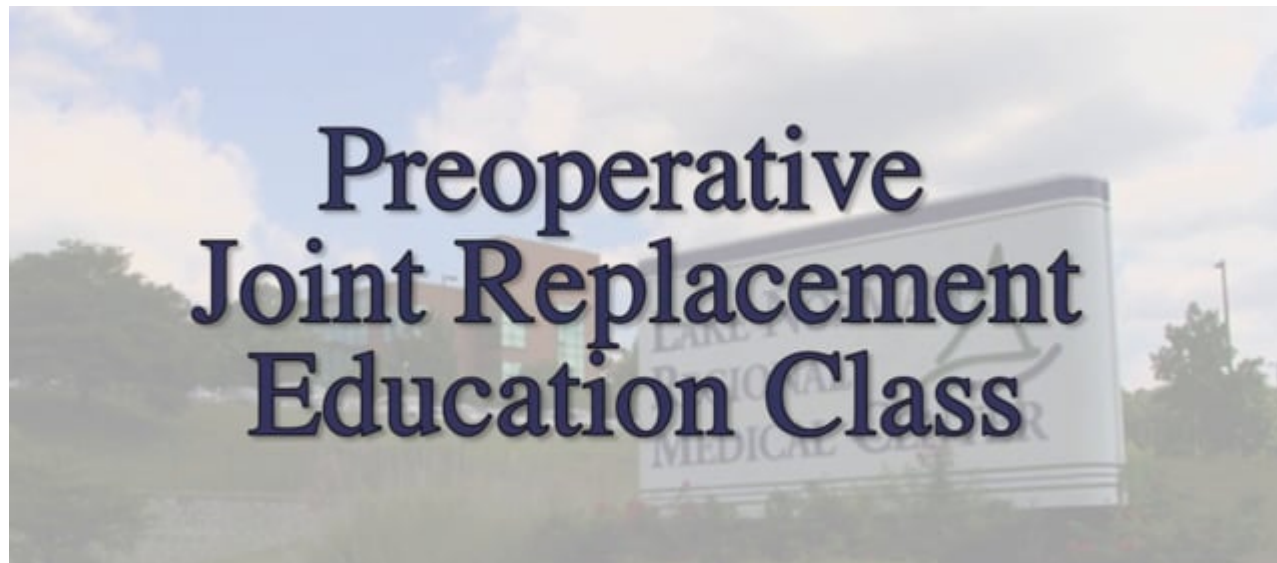
- Good joint replacement candidates
 - Not satisfied with non-surgical treatment
 - Medically optimized
 - Understand the procedure, risks, benefits and recovery

SURGERY

- Total hip replacement
- Total knee replacement
- Partial knee replacement
- >1 million patients annually
- Goals of surgery
 - Relieve pain
 - Improve mobility
 - Return to more active/fulfilling lifestyle

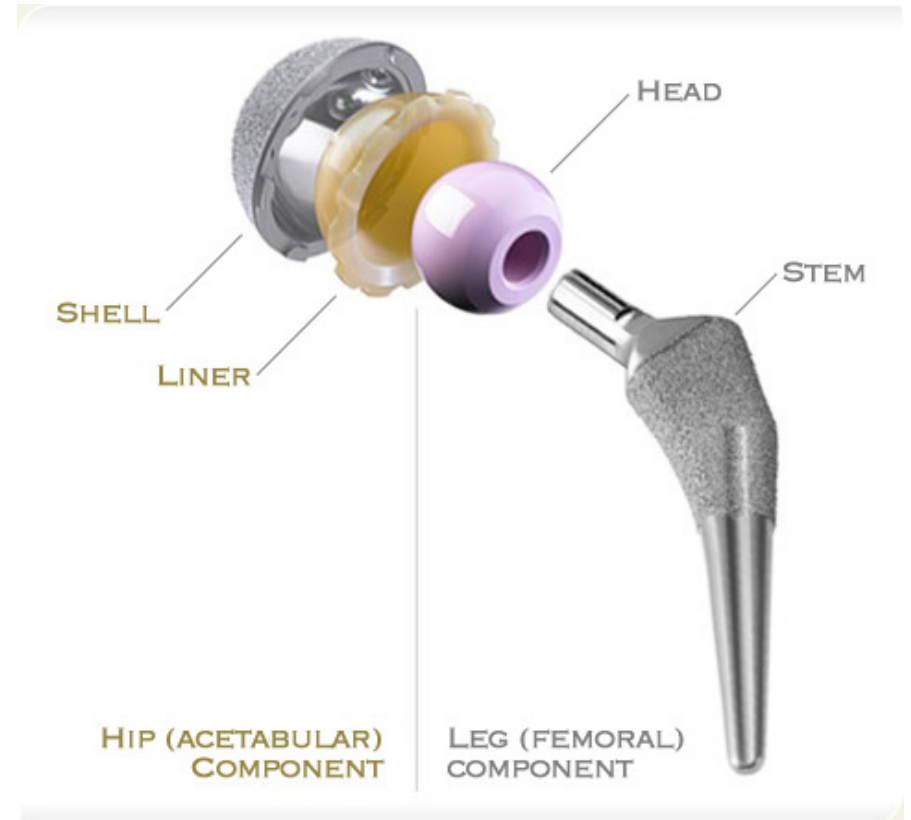
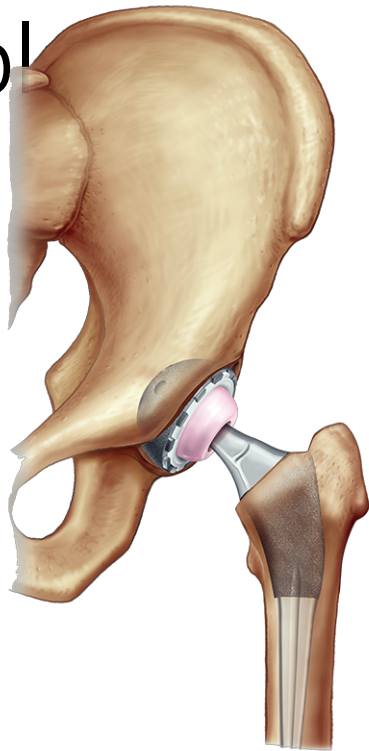
PREPARING FOR SURGERY

- Evaluation by internist/primary care physician
 - May need subspecialist clearance
- Pre-op education class



WHAT IS A HIP REPLACEMENT

- Surgical procedure that removes and replaces diseased joint surfaces with impl



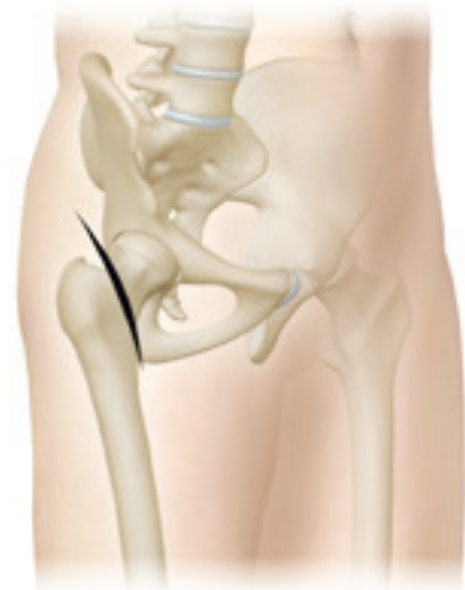
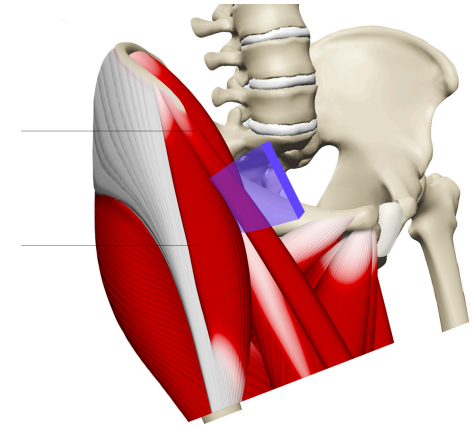
SURGICAL STEPS



- Expose the hip joint
- Remove the head
- Prepare the socket/
femur
- Trial components –
insure muscle balance
and length correct
- Place final implants

ANTERIOR APPROACH

- *What is it?*
 - Incision made on front (anterior) of leg instead of the side or back
 - Surgeon works between muscles and does not have to detach them from the hip
 - Utilizes a special OR table, X-ray and computer assistance for precise positioning of implants

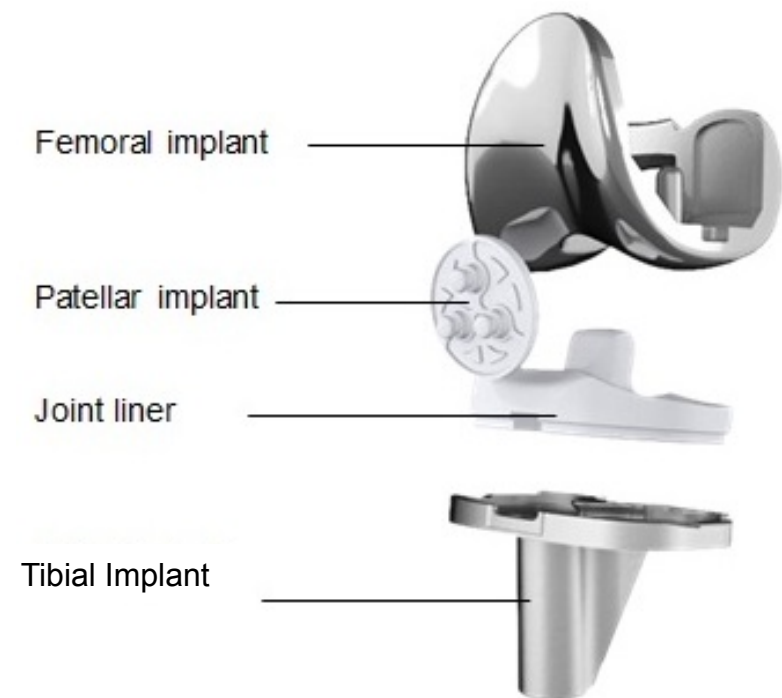


POTENTIAL BENEFITS OF ANTERIOR APPROACH

- Less trauma to the body
- Small incision
- Potentially less pain
- Less need for medication
- Faster recovery (not waiting for muscles to heal)
- Less restrictions after surgery
- Potential for less complications

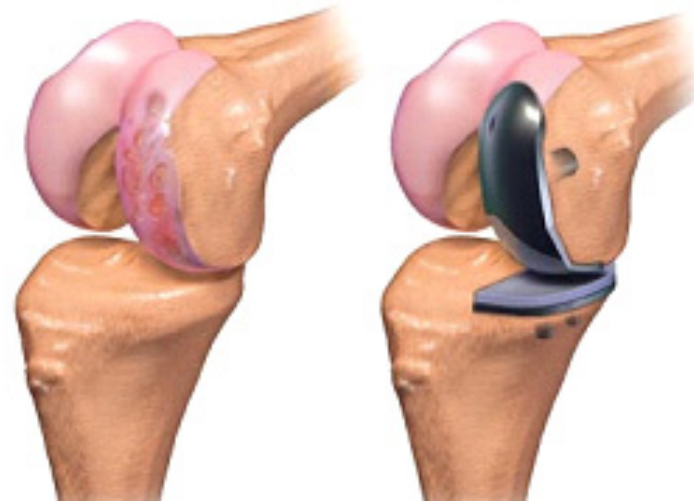
WHAT IS A KNEE REPLACEMENT

- Surgical procedure that removes and replaces diseased joint surfaces with implants



TOTAL VS PARTIAL KNEE REPLACEMENT

- Total knee replacement: replaces the entire knee
- Partial knee replacement ("uni") replaces only the diseased part of your knee
- Discuss with your surgeon whether or not you are candidate



KNEE REPLACEMENT STEPS



- Expose the knee joint
- Reshape the bone ends
- Balance the ligaments and soft tissue
- Correct leg deformity

WHAT TO EXPECT

- Out of bed on the day of surgery with therapy
- Immediate full weight bearing, no range of motion restrictions (hip or knee replacement)
- Progression of therapy as patient tolerates
- Some patients go home the day of surgery, others stay 1-2 nights (partial knee replacement home same day)
- Home with walker – transition to cane

WHAT TO EXPECT

- Waterproof dressing – able to shower immediately
- Sutures typically underneath the skin – dissolve on their own
- *Comprehensive Rapid Recovery Program*
 - Spinal/epidural with twilight sedation
 - Precise surgery to minimize tissue trauma
 - Multi-modal pain program to decrease pain after surgery
 - Rapid return to exercise and activity

WHAT HAPPENS AFTER 20 YRS

- They do not fall apart at 21 years
- Most continue to function well
- 20-25 is a reasonable expectation
- Can wear out/loosen
- Revision can be done and good results can be achieved
- Roughly 0.5-1 % of hip/knee replacements revised yearly
 - At 10 years 90-95% survivorship
 - At 20 years 80-85% survivorship



SUMMARY

- Very successful surgery
- Excellent long term results
- Patients very happy

THANK YOU



OrthoVirginia

For patient appointments
call 804-915-1910